

Appl. No.: 10/762,495
Atty. Docket: 2003B004/2
Amendment dated March 13, 2007
Reply to Office Action of December 14, 2006

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REMARKS/ARGUMENTS

Claim Status – Request for Reconsideration

Reconsideration of this application is requested. The claims presented for reconsideration are claims 1-5, 7-15 and 76-79.

Claim 1 has been amended to incorporate the subject matter of now canceled claim 6. Additionally, claim 1 has been amended to specify that the catalyst fines entrained in the first liquid fraction are settled in a first settling vessel, and at least a portion of the first liquid fraction is removed from the first settling vessel. This description is consistent with the description in the specification at paragraphs 0083 and 0085.

Claims 76-79 are newly added. In addition to several of the limitations described in claim 1, claim 76 further includes the requirements of removing at least a portion of the first liquid fraction to a second settling vessel and forming a clarified aqueous liquid; and removing the clarified aqueous liquid from the second settling vessel. These limitations are consistent with the descriptions in the specification as paragraphs 0085 and 0086. Claims 77-79 are also consistent with the descriptions in the specification at paragraph 0086. Accordingly, no new matter is introduced by way of this amendment.

Claim Rejections - 35 U.S.C § 102

Claims 26 and 27 were rejected under 35 U.S.C. § 102(b) as being anticipated by Miller (US 6,403,854). These claims having been canceled, this rejection is rendered moot.

Claim Rejections - 35 U.S.C § 103

Claims 1-25 and 28-75 were rejected under 35 U.S.C. § 103(a) as unpatentable over Miller in view of Oleszko (US 3,674,890). This rejection is traversed and reconsideration is requested.

Miller discloses a process for quenching a reactor effluent stream from an oxygenate-to-olefins reaction system that involves the use of a two stage quench apparatus. Water is removed from the reactor effluent stream in the first stage or tower and heat is recovered from the reactor effluent to at least partially vaporize the feedstream by indirect heat exchange between the

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oxygenate feedstream and either a first stage overhead stream or a first stage pumparound stream. A drag stream withdrawn from the first tower comprises the majority of the impurities and any higher boiling oxygenates. The second stage tower further removes water from the light olefin product stream and provides a purified water stream which requires only minimal water stripping to produce a high purity water stream.

Applicants' claimed invention differs from the Miller process in that Miller does not cool a second liquid fraction that is produced in a second quench stage and then use that cooled second liquid fraction to quench the reactor effluent stream in the first quench stage. The only liquid streams from Miller's second stage quench that are cooled are streams 34 and 36 in Fig. 2, and streams 74 and 77 in Fig. 3. None of those streams is sent back to the first stage. The only stream that is cooled in the Miller process and sent back to the first stage quench is stream 66, 67, and that stream comes from the first stage, not the second stage. This means that if there are any entrained solids, such as catalyst fines, in the quenched liquid in Miller's first quench stage, these solids are highly likely to contaminate exchanger 84 shown in Miller Fig. 3. Following applicants' claimed process, contamination of equipment in the first quench stage is less likely. Such an arrangement is not suggested by Miller.

Oleszko discloses quenching pyrolytically cracked gas by separating a hydrocarbon-water emulsion produced in a quenching zone having a plurality of stages. The emulsion is separated in a separation zone and then transferred back to the initial or first stage of the quenching zone.

Oleszko also differs from applicants' claimed invention in that Oleszko does not cool a second liquid fraction that is produced in a second quench stage and then use that cooled second liquid fraction to quench the reactor effluent stream in the first quench stage. In fact, none of the streams used for quenching are shown to be cooled. Moreover, the first liquid stream 6 in the Oleszko apparatus is recycled back to the first quench stage by way of line 3, and the second quench stream from the second stage 16 is recycled back to the second stage by way of line 18. This significantly differs from the claimed invention. Therefore, combining Oleszko with Miller fails to disclose or suggest cooling a second liquid fraction that is produced in a second quench stage, and then use that cooled second liquid fraction to quench the reactor

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effluent stream in the first quench stage. Accordingly, neither Oleszko nor Miller, taken alone or in combination, disclose or suggest the claimed invention.

CONCLUSION

Having demonstrated that the cited references fail to disclose or suggest the invention as claimed, and all other formal issues having now been fully addressed, this application is believed to be in condition for allowance. Accordingly, Applicant requests early and favorable reconsideration in the form of a Notice of Allowance.

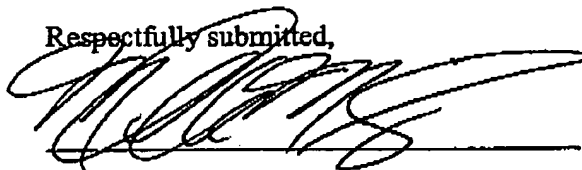
If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated, since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response. Please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1712 (Docket #: 2003B004/2).

Date: _____

3/13/07

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